

Supplementary data Index:

(For: Salt stress in *Desulfovibrio vulgaris* Hildenborough: An integrated genomics approach. Mukhopadhyay et al)

A) Stress response assays:

- 1) Log plots of all growth curves from Fig 1 in manuscript
- 2) Role of Proline, Choline and other osmolyte precursors in KCl stress
- 3) Role of Sarcosine and other Glycine betaine precursors in NaCl or KCl stress
- 4) Role of Tryptophan in NaCl or KCl stress
- 5) Effect of Iron limitation in high NaCl.

B) Microscopy data for KCl Stressed cells

C) Metabolite data (CEMS)

D) Microarray data:

- 1) Raw microarray data: NCBI GEO accession number GSE4447
- 2) Complete list of log ratios and z values: See Saltmicroarrays.xls
- 3) Analyzed microarray data:
<http://www.microbesonline.org/cgi-bin/microarray/viewExp.cgi?expId=14+20+33>
- 4) Volcano plots

E) Microarray data of Tryptophan biosynthesis and flagellar genes in salt stress.

F) PLFA data

- Total change in PLFA
Mole fraction of individual PLFA types
Relative change in individual PLFA types
Structure of discussed Fatty Acids

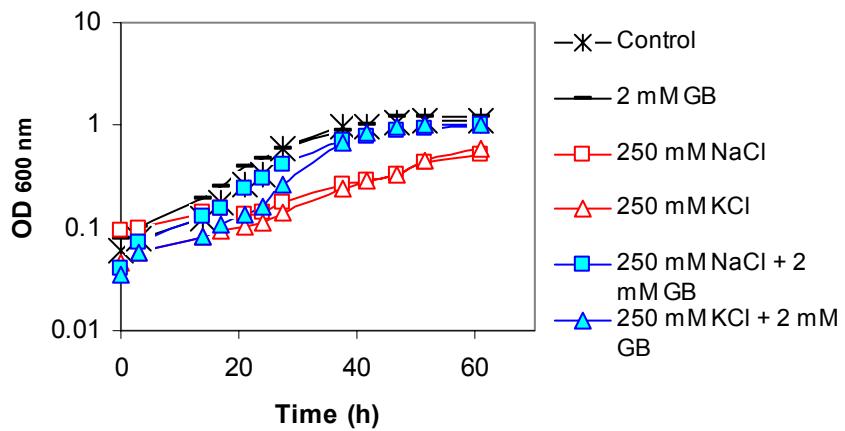
G) Complete Proteomics data:

See attached excel sheet

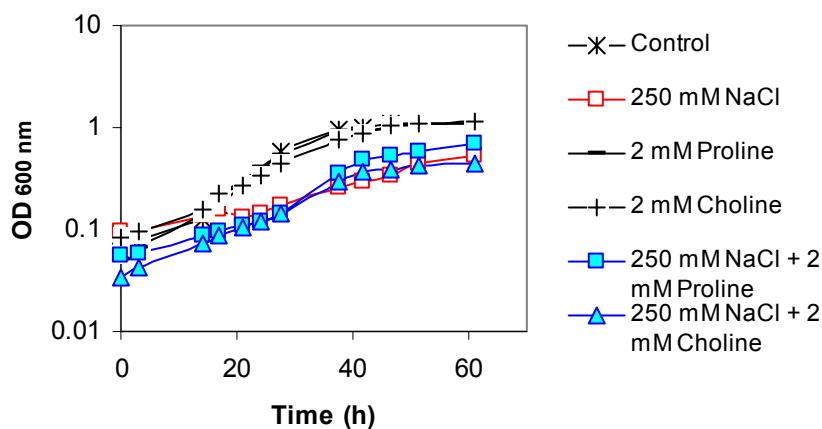
Section A)

1) Log Plots for Figure 1:

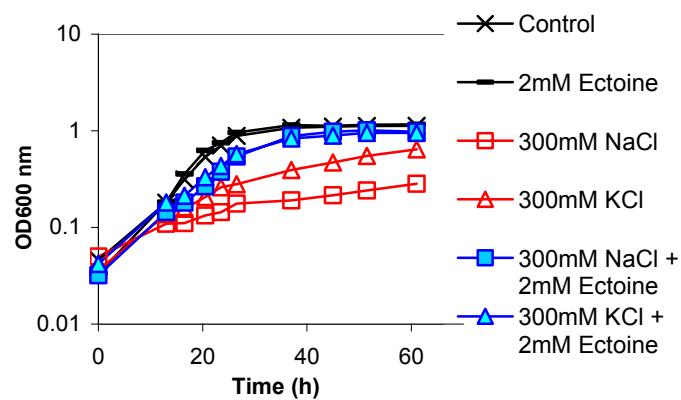
(i) NaCl and KCl reduce growth and Glycine betaine reverses much of the effect



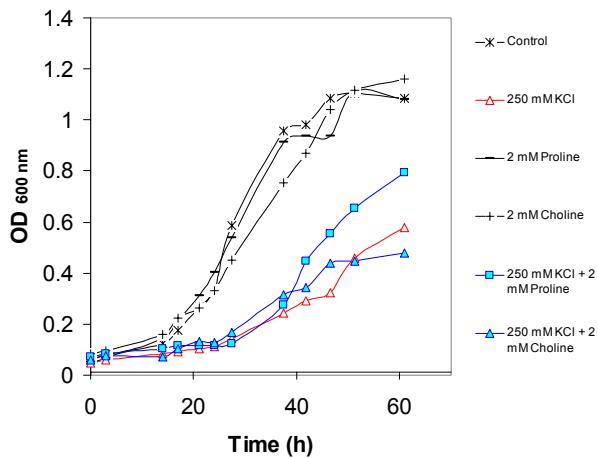
(ii) Proline was less effective than Glycine betaine; Choline ineffective



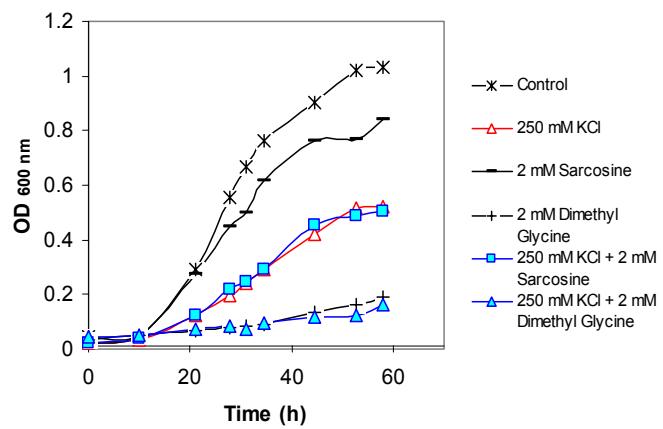
(iii) Ectoine is as effective as Glycine betaine



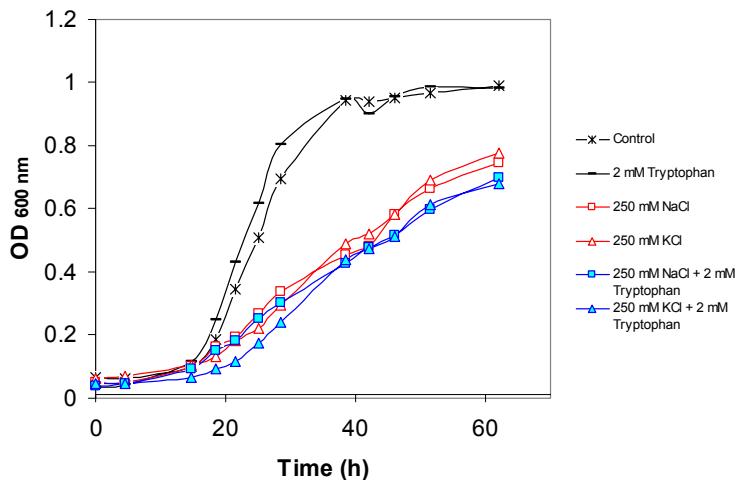
2) Role of Proline, Choline and other osmolyte precursors in KCl stress



3) Role of Sarcosine and other Glycine betaine precursor in NaCl or KCl stress

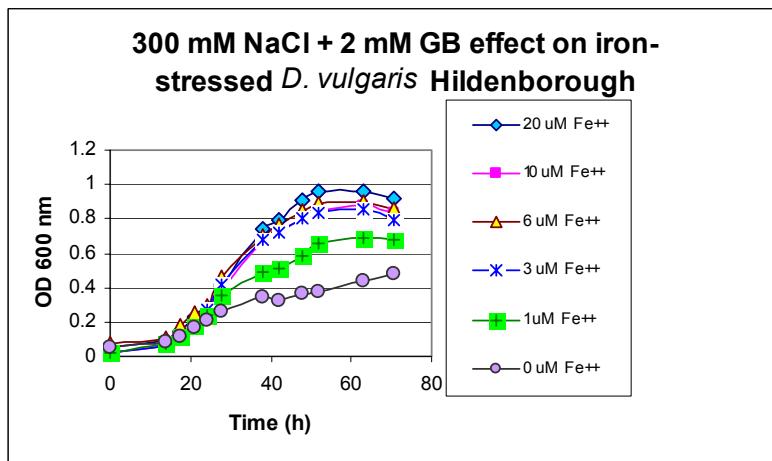
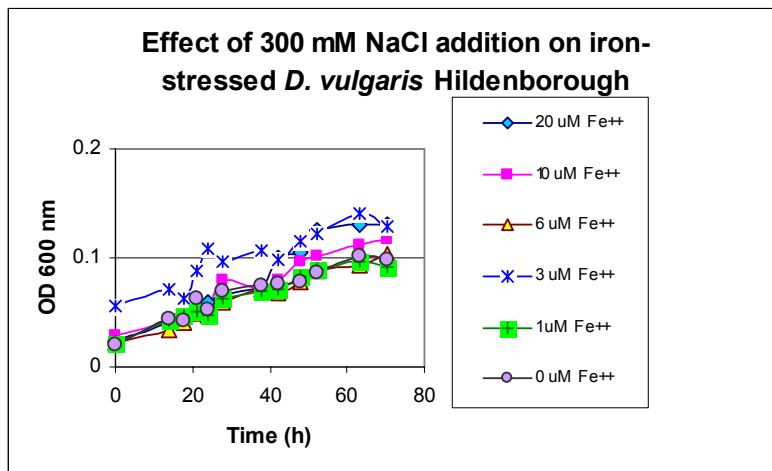
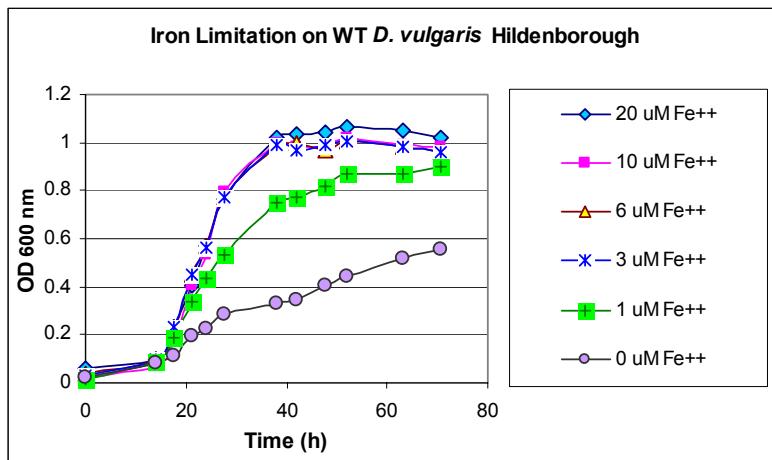


4) Role of Tryptophan in NaCl or KCl stress

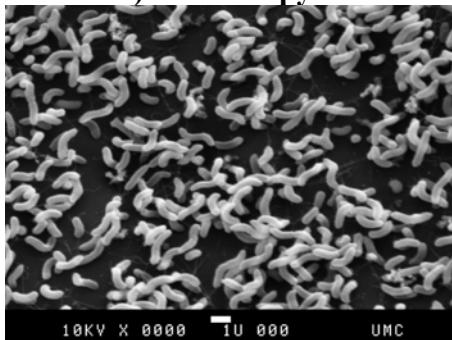


5) Effect of Iron limitation in high NaCl.

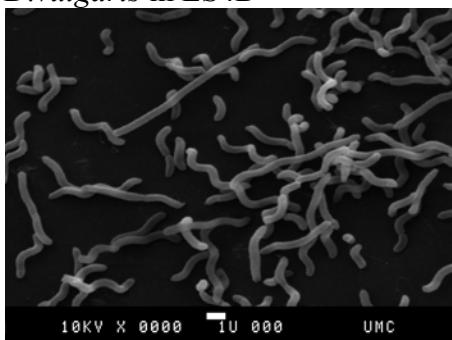
Medium: Modified LS4D with lactate 60 mM/sulfate 30 mM /2 mls trace elements/ no resazurin. FeCl₂ stock=125 mM (+250 mM EDTA)



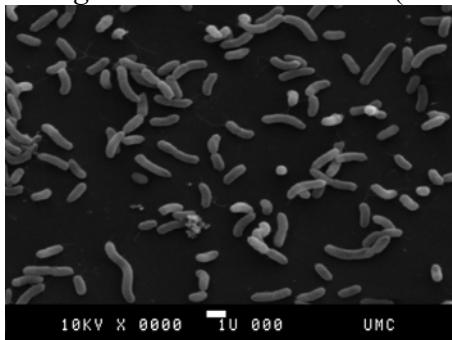
Section B) Microscopy data for KCl Stressed cells



D.vulgaris in LS4D

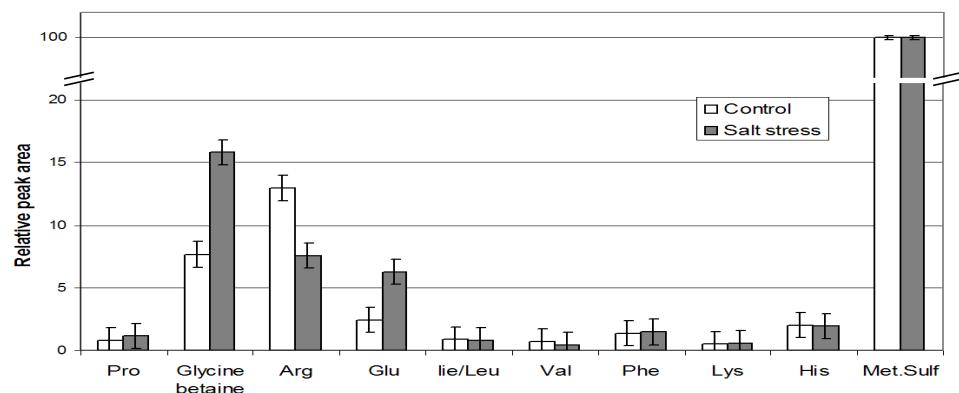


D.vulgaris in LS4D with KCl (250mM)



D.vulgaris in LS4D with KCl (250mM) and Glycine Betaine (2mM)

Section C) Metabolite data (CEMS)



Metabolite Assay Complete data set. Realitive quantitation is relative to internal standard, Methyl sulfone (100%)

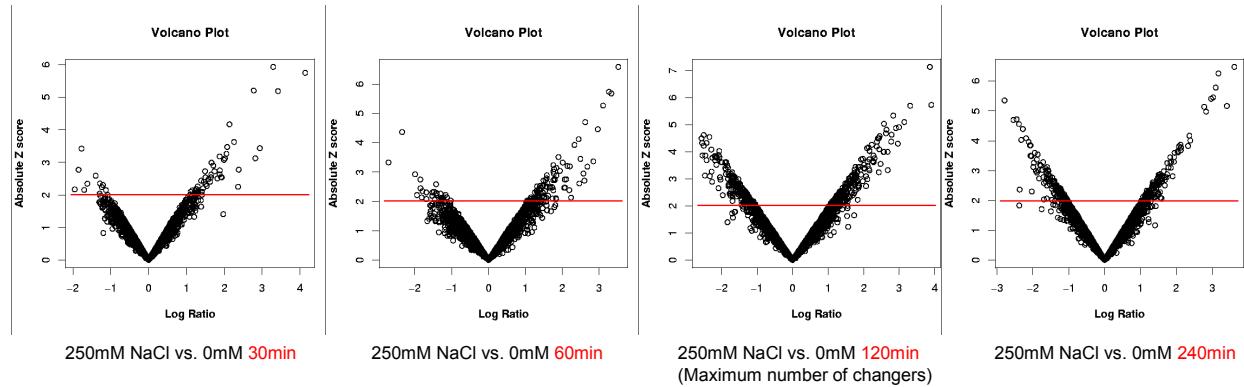
Section D)

- 1) Raw microarray data: NCBI Accession number:
- 2) Complete list of log ratios and z values: See Saltmicroarrays.xls
- 3) Analyzed microarray data:
<http://www.microbesonline.org/cgi-bin/microarray/viewExp.cgi?expId=14,20,33>

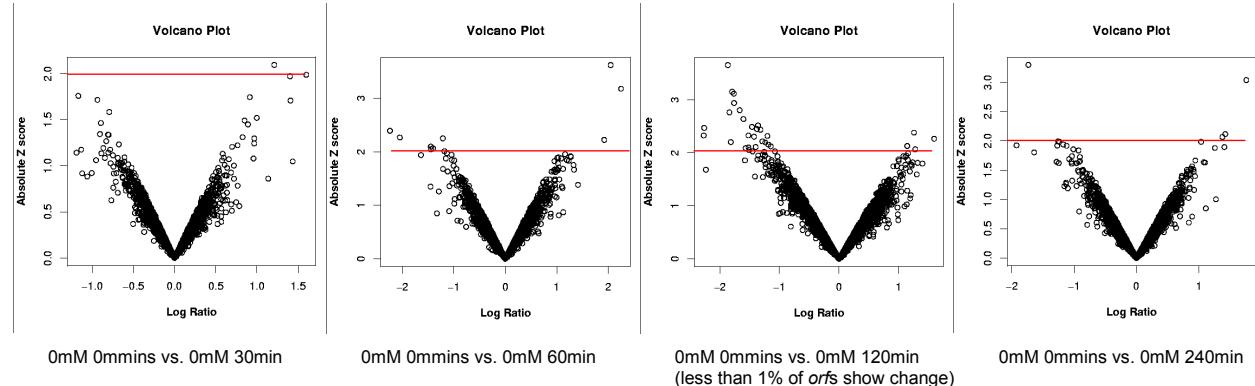
4) Volcano plots

These plots present a view of how many changes with $|z| > 2$ (cut off marked in red) were seen for a given microarray comparison. For salt stress, 250mM NaCl vs. 0mM NaCl at 120mins showed the maximum number of changers. Very few changers were observed for cells without stress (growth).

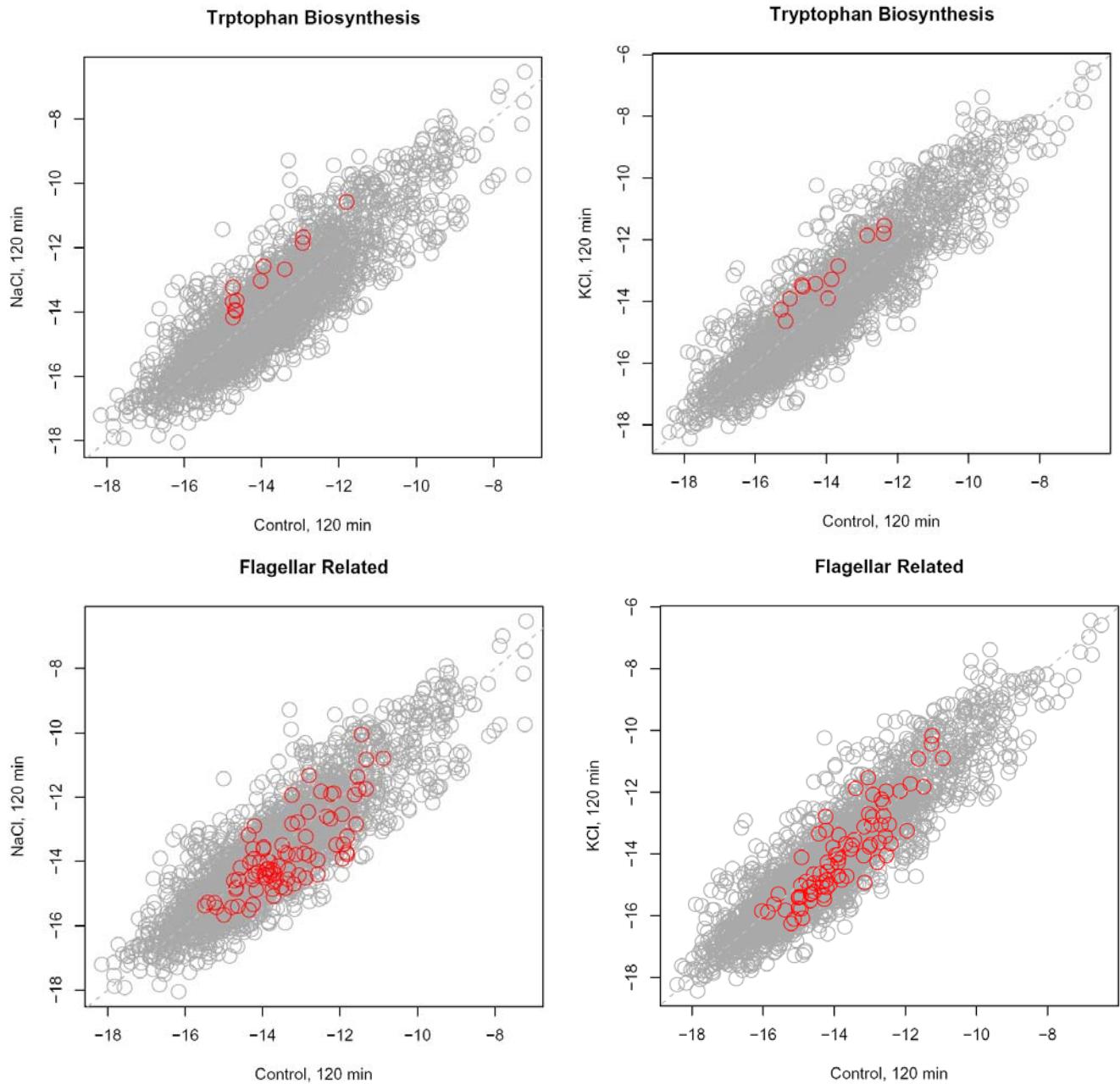
Number of Changers in Salt Stress



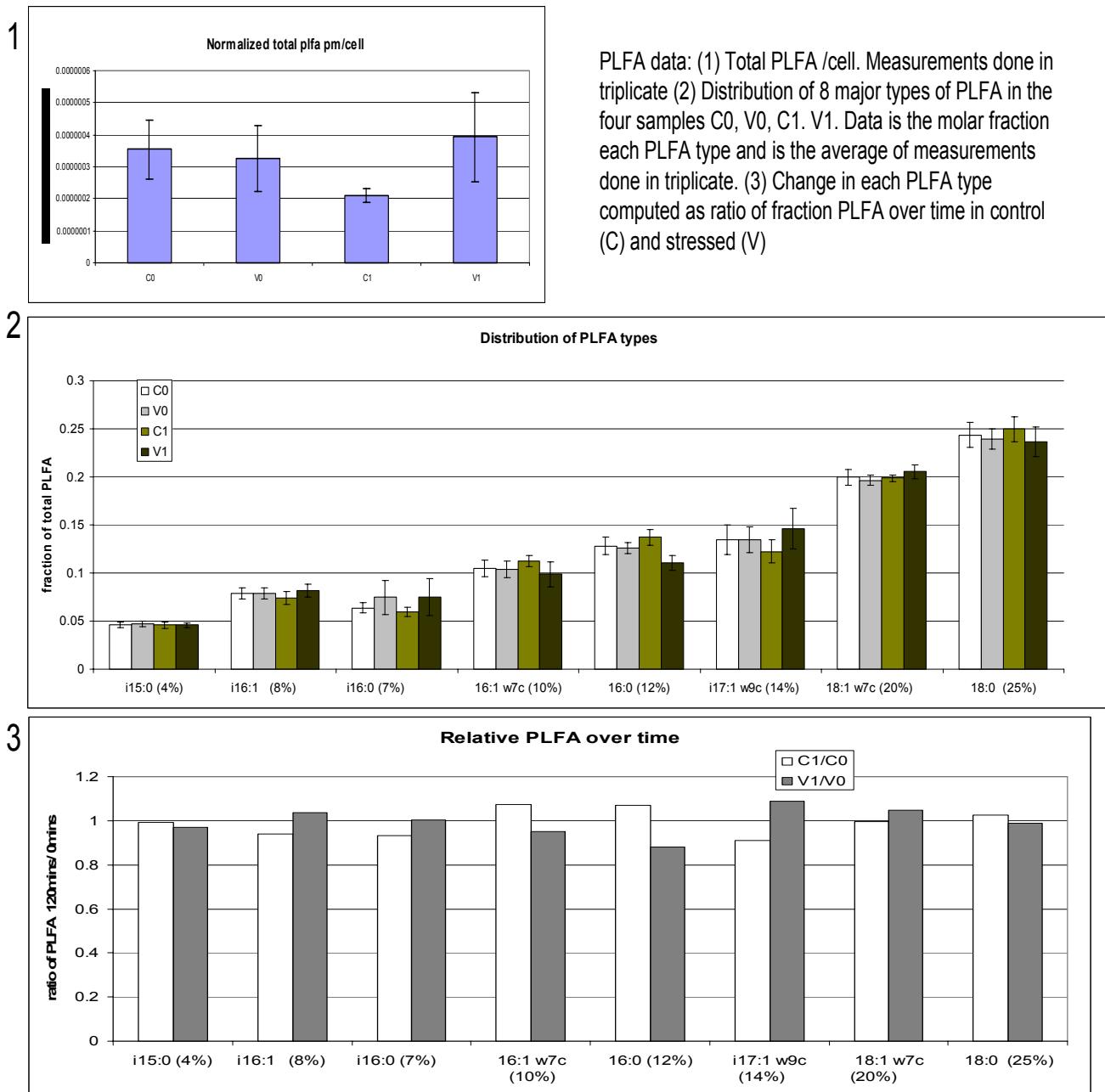
Number of Changers in Growth



Section E) Microarray data for tryptophan biosynthesis and flagellar genes in NaCl and KCl stress at 120min:



Section F) PLFA data



Structure of discussed Fatty Acids

